PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 65306-0134	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable. item 5 below.
International application No. PCT/US05/09046	International filing date (*day/month/year*) 17 March 2005 (17.03.2005)	(Earliest) Priority Date (*day/month/year*) 17 March 2004 (17.03.2004)
Applicant THE REGENTS OF THE UNIVERSITY OF MICHIGAN		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (See Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant. ✓

☐ the text has been established by this Authority to read as follows:

Examiner

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant. ✓

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant. ☐ None of the figures

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/09046

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : H04R 29/00; A61N 1/18; A61B 5/00
US CL : 381/60; 600/559; 607/55,56,57
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 381/60; 600/559; 607/55,56,57

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
IEEE Explore

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	Lim, Hubert H. Feasibility Experiments for the Development of a Midbrain Auditory Prosthesis. 1st International IEEE EMBS Conference on Neural Engineering. March 20-23, 2003, pages.193-196	1,13,1,16,24,29,39,40
X --- Y	US 2005/0033377 (Milojevic et al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050, 0056,0244-0247) Cheung, Karen C. Implantable Multichannel Electrode Array Based on SOI Technology. Journal of Microelectromechanical Systems, VOL. 12, NO. 2, April 2003, pages 179-184.	1,2,13,15,16,24,29,39,40 ---------- 2
X --- Y	US 2005/0033377 (Milojevic et al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050,0056,0244-0247) Bai, Q. et al. A High-Yield Microassembly Structure For Three-Dimensional Microelectrode Arrays. IEEE Transactions on Biomedical Engineering, VOL. 47, NO. 3, March 2000	1,2,13,15,16,24,29,39,40 ---------- 3-8,19,32

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 June 2005 (15.06.2005)	25 SEP 2006
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner of Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Vivian Chin Telephone No. 571-272-4700

Form PCT/ISA/210 (second sheet) (July 1998)

PCT/US05/09046

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2005/0033377 (Milojevic et. al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050,0056,0244-0247 Hetke, J. et al. Design Ranges for Silicon Multicahnel Neural Probes. 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Amsterdam 1996	1,2,13,15,16,24,29,39,40 ---------- 3-4
X --- Y	US 2005/0033377 (Milojevic et al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050,0056,0244-0247 Anderson, D. et al. Batch-Fabricated Thin-Film Electrodes for Stimulation of the Central Auditory System. IEEE Transactions on Biomedical Enginnering, VOL. 36, NO. 7, July 1989	1,2,13,15,16,24,29,39,40 ---------- 4-8
X --- Y	US 2005/0033377 (Milojevic et al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050,0056,0244-0247 Wise, K.D. et al. Wireless Implantable Microsystems: High-Density Electronic Intefaces to the Nervous System. Proceedings of the IEEE, VOL. 92, NO. 1, January 2004	1,2,13,15,16,24,29,39,40 ---------- 20,33
X --- Y	US 2005/0033377 (Milojevic et al.) 10 February 2005 (10.02.2005), paragraphs 0035-0050,0056,0244-0247 US 6,381,336 (Lesinski et al.) 30 April 2002 (30.04.2002), Figure 6, column 7, lines 25-40	1,2,13,15,16,24,29,39,40 ---------- 14
A --- A	US 2005/0004627 (Gibson et al.) 06 January 2005 (06.01.2005) US 4,261,372 (Hansen et al.) 14 April 1981 (14.04.1981)	